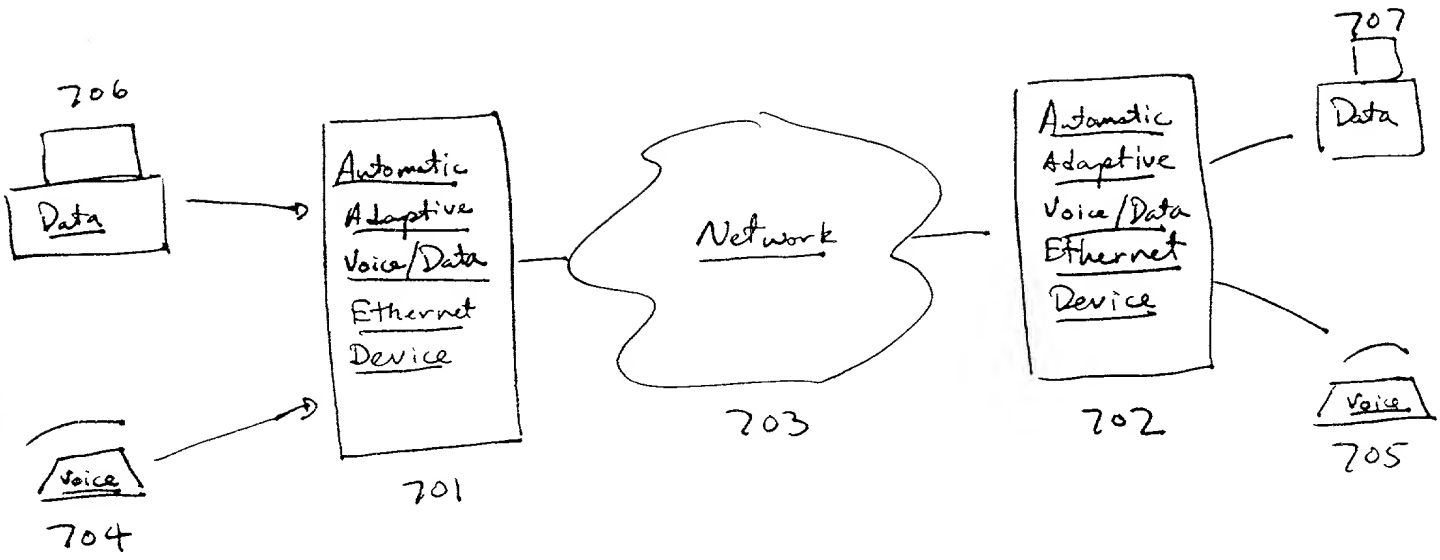

706
Data
Voice
704
Automatic
Adaptive
Voice/Data
Ethernet
Device
701
Network
703
Automatic
Adaptive
Voice/Data
Ethernet
Device
702
707
Data
Voice
705

Fig. 1

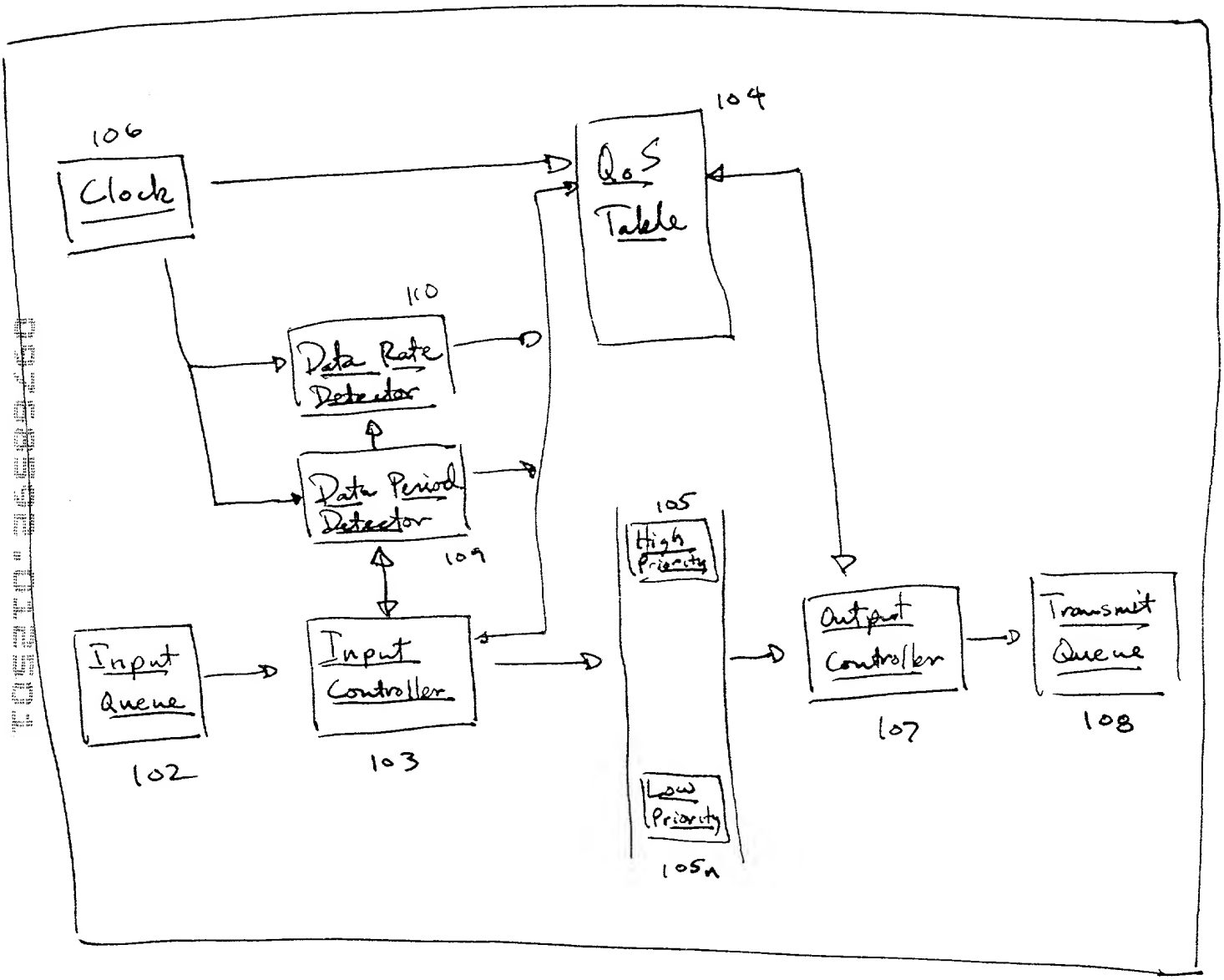

106
Clock
104
QoS Table
110
Data Rate Detector
Data Period Detector
109
105
High Priority
Low Priority
105n
Input Queue
102
Input Controller
103
Output Controller
107
Transmit Queue
108

Fig. 2

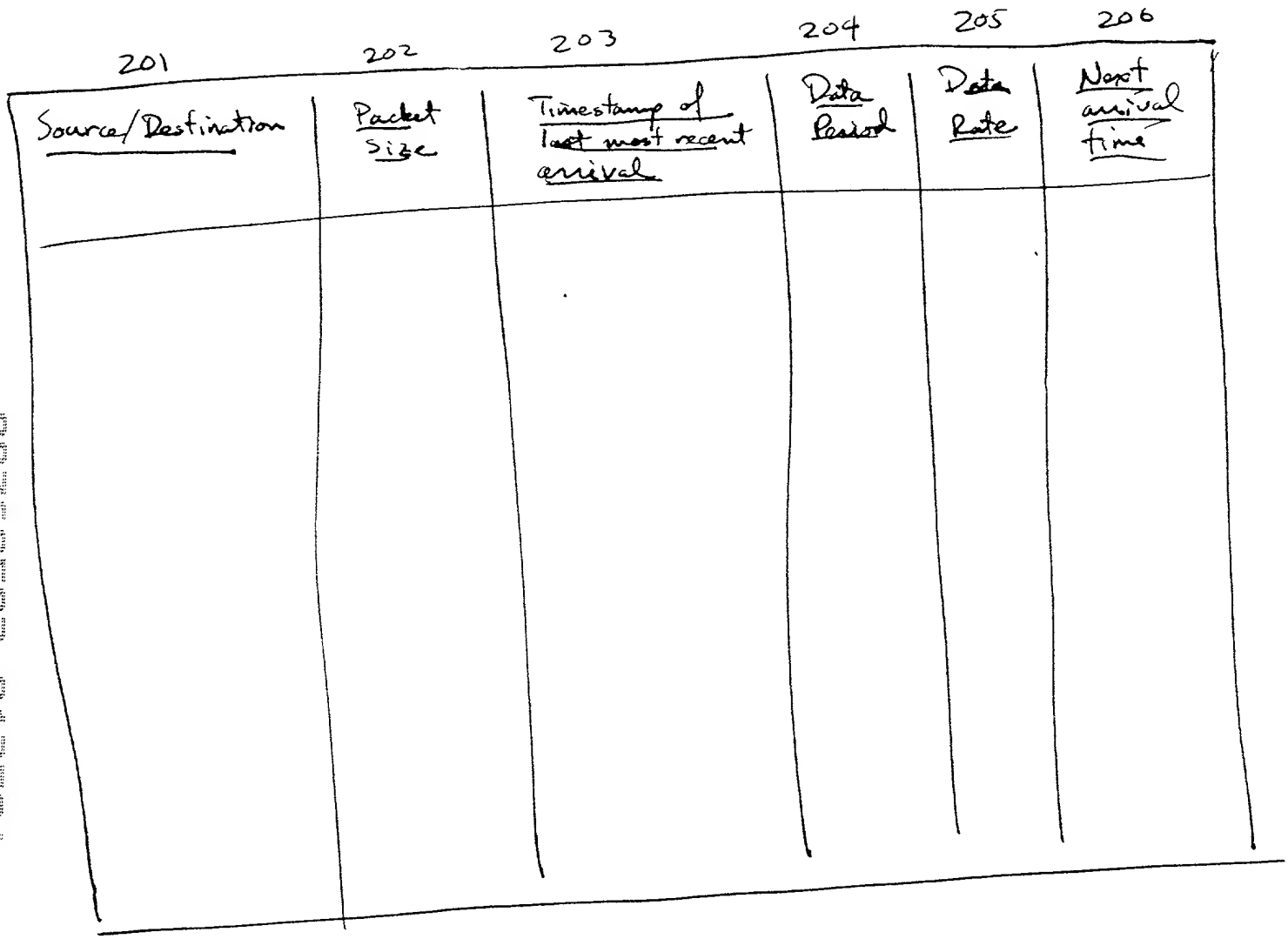

201
202
203
204
205
206
Source/Destination
Packet Size
Timestamp of last most recent arrival
Data Period
Data Rate
Next arrival time

Fig. 3

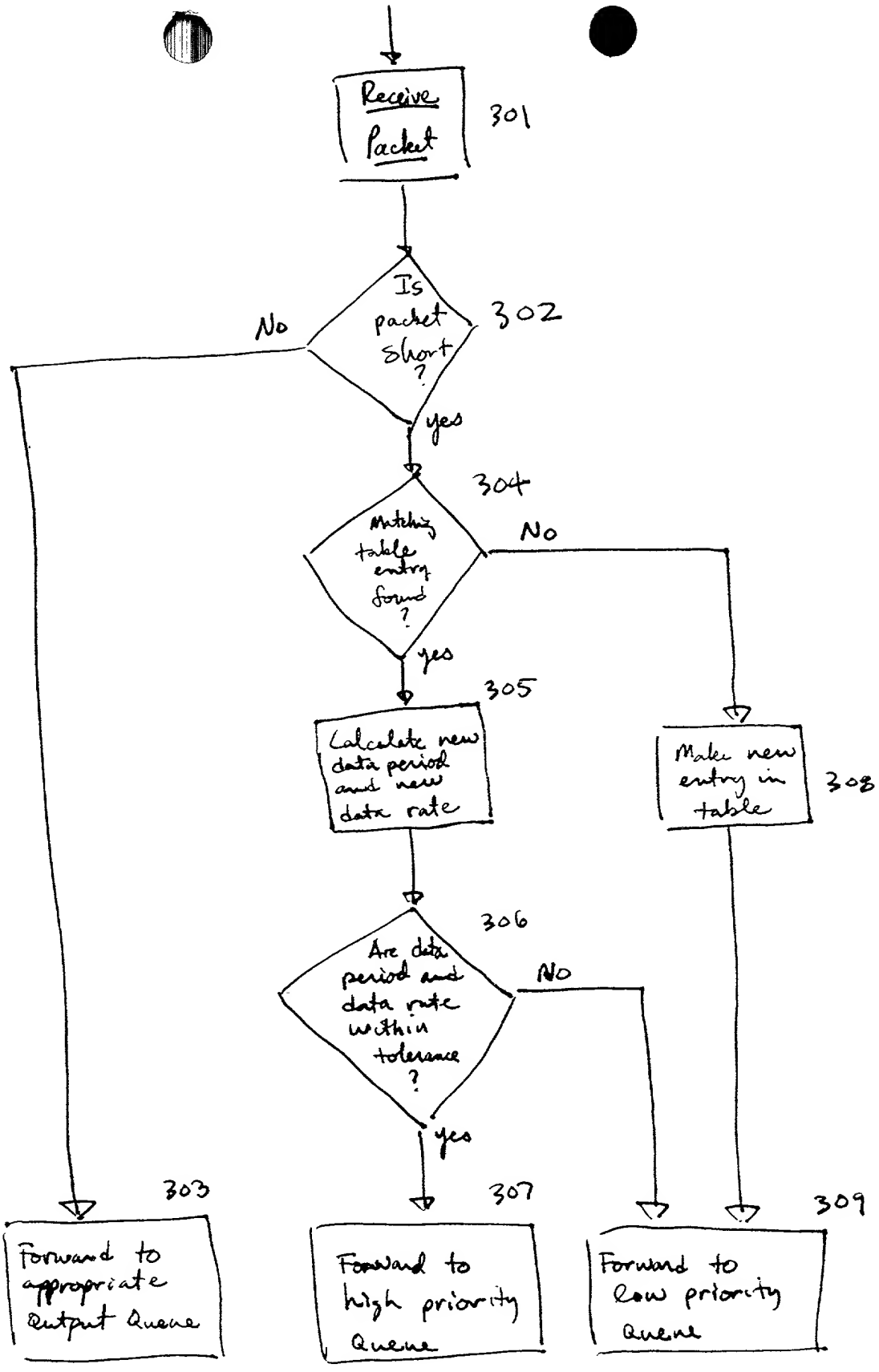

Receive Packet
301
Is packet short ?
302
No
yes
304
Matching table entry found ?
No
yes
305
Calculate new data period and new data rate
Make new entry in table
308
306
Are data period and data rate within tolerance ?
No
yes
303
Forward to appropriate output Queue
307
Forward to high priority Queue
309
Forward to low priority Queue

Fig. 4

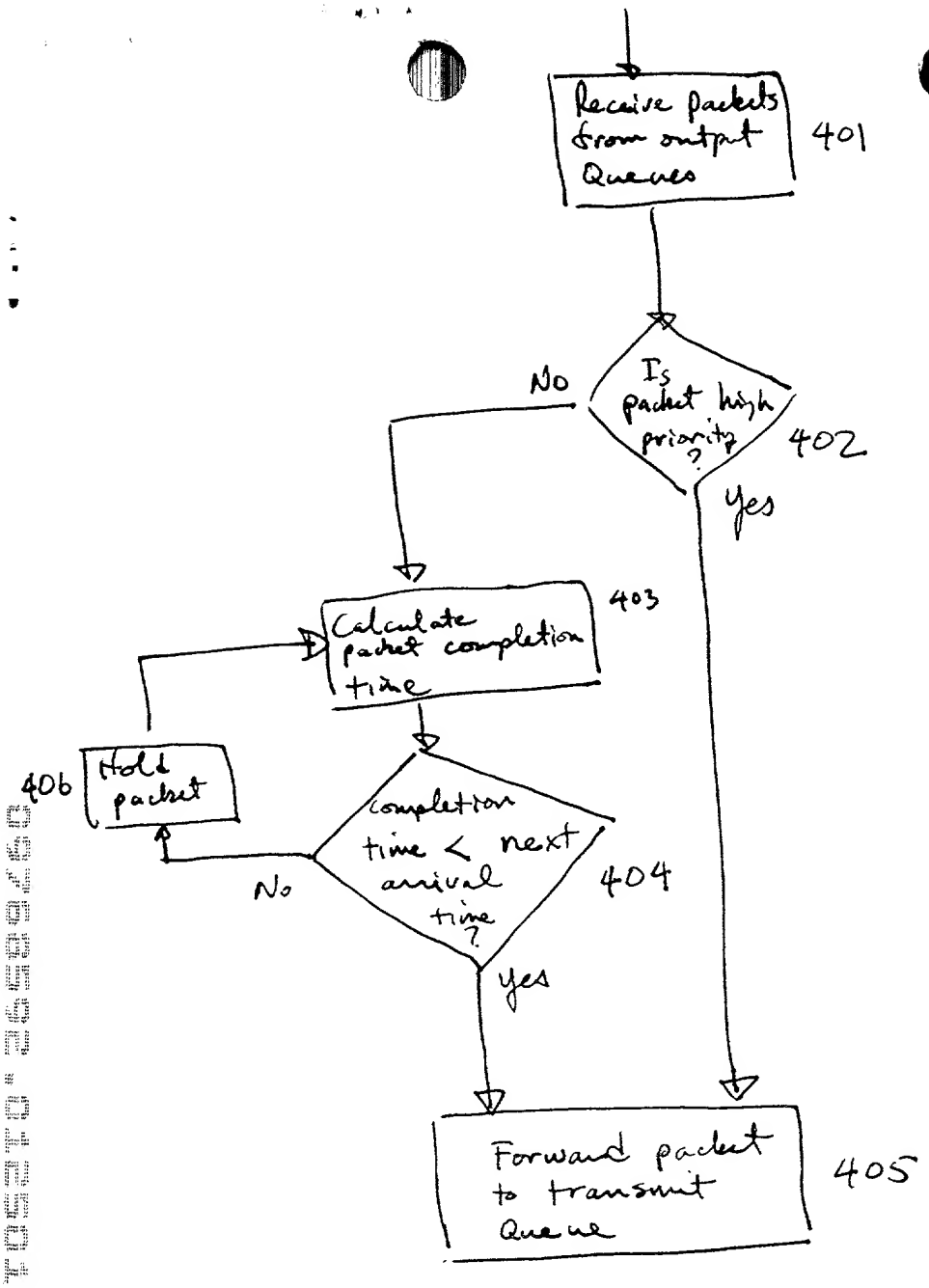
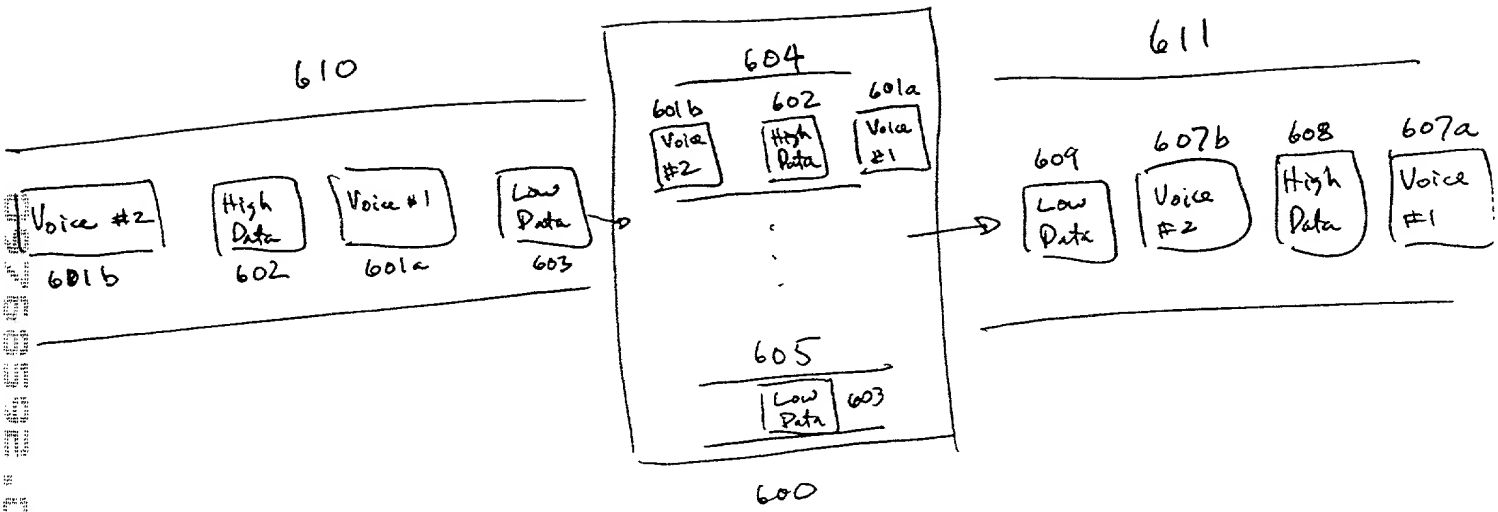
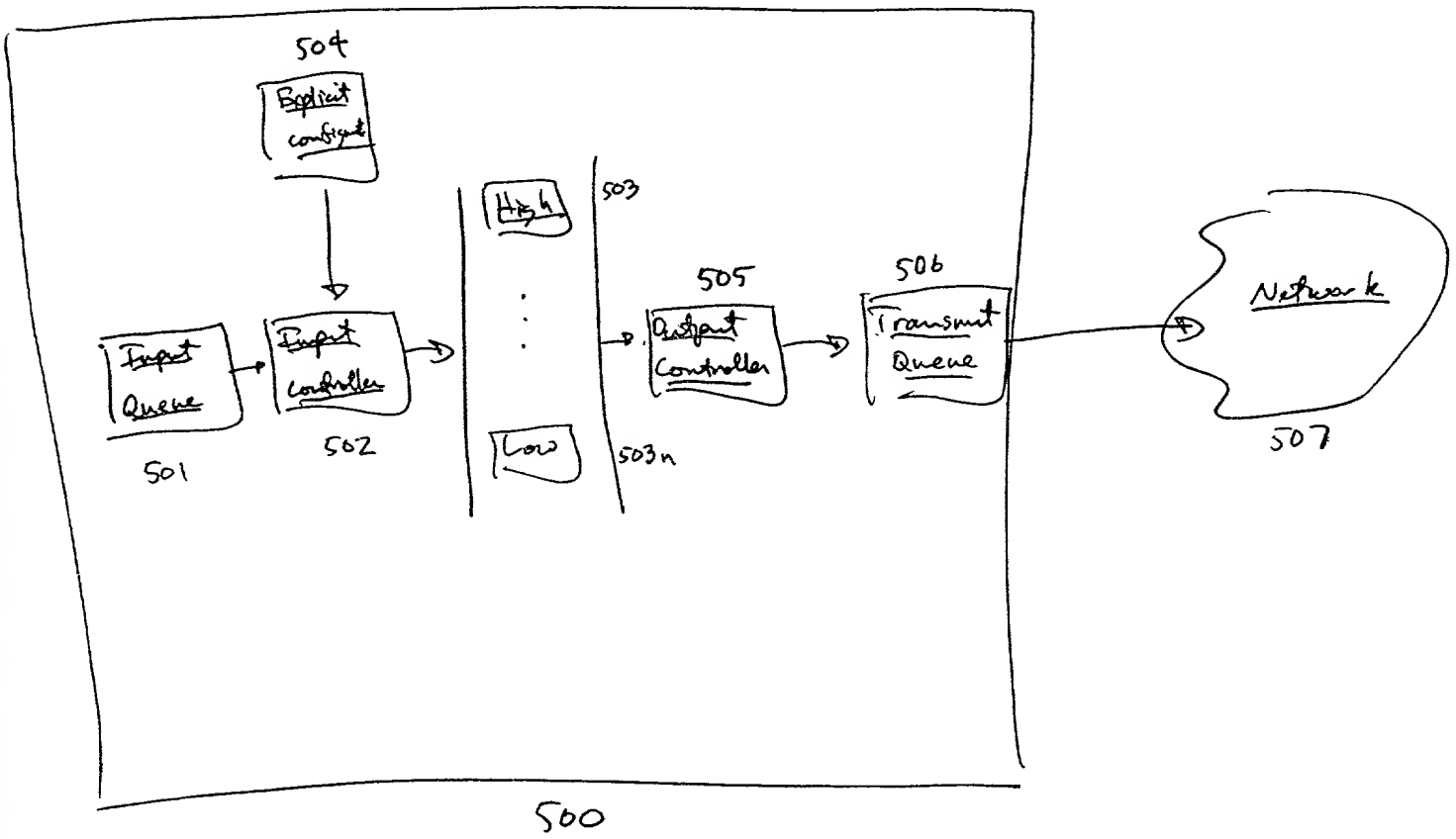

Receive packets from output Queues
401
Is packet high priority ?
402
No
Yes
Calculate packet completion time
403
Hold packet
406
completion time < next arrival time ?
404
No
Yes
Forward packet to transmit Queue
405

Fig. 5



PRIOR ART

FIG. 6



PRIOR ART

FIG. 7